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| 10/791,441 | 03/01/2004 | Sang Kyoong Hyun | CISCP854 | 3445 |
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| Cindy S. Kaplan P.O. BOX 2448 SARATOGA, CA 95070 | | | EXAMINER HO, HUY C | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/791,441

Applicant(s)

HYUN ET AL.

Examiner

HUY C. HO

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1.5-10 and 14-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1.5-10 and 14-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/01/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/13/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 8, 9, 10, 17, 18, 19, 20, 22-26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

Art Unit: 2617

later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or

nonobviousness.

6. Claims 1, 5-10 and 14-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al. (6,965,942) in view of Moerder (6,674,730) and further in view of Nemoto (7,006,534).

Consider claim 1, (Currently Amended) Young discloses a method for operating a point-to-multipoint wireless communication network (see the abstract), said method comprising:

Young discloses:

~~measuring delays between a root bridge and a plurality of non-root bridges~~ (the abstract, col 2 lines 30-48, col 5 lines 4-9, , col 10 lines 45-67, col 11 lines 1-3, disclosing network conditions, i.e., number of transmissions/receptions, collisions are monitored between stations and an access point in within a WLAN);

using said measured delays to coordinate transmissions in a CSMA/CA scheme (col 1 lines 55-64, col 2 lines 30-48, col 6 lines 50-67, col 7 lines 1-5, col 10 lines 45-67, col 11 lines 1-3, describing usage of the monitored condition of network traffic load).

calculating a common time slot value based on said measured link delays;

distributing said measured link delays and said time slot value within said point-to-multipoint wireless communication network (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35); and

aligning contention timing boundaries based on said measured link delays to coordinate

Art Unit: 2617

transmissions in a carrier-sense multiple access with collision avoidance scheme (col 4 lines 25-45, col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not specifically show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 8, (Currently Amended) Young discloses method for operating a node in a point-to-multipoint wireless communication network (see the abstract), said method comprising:

receiving a measured delay and a system slot time from another node (col 2 lines 35-67, col 3 lines 1-5, col 6 lines 50-67, col 7 lines 1-5, 50-55, col 8 lines 37-50, col 10 lines 45-67, col 11 lines 1-3);

using said measured delay and said system slot time to coordinate transmissions in a CSMA/CA scheme (col 1 lines 55-64, col 2 lines 30-48, col 6 lines 50-67, col 7 lines 1-5, col 10 lines 45-67, col 11 lines 1-3), wherein contention timing boundaries are aligned based on said measured link delay and said common slot time (col 4 lines 25-45, col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to

Art Unit: 2617

modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 9, (Currently Amended) Young discloses a method for operating a point-to-multipoint wireless communication network (see the abstract), said method comprising:

measuring delays between an access point and a plurality of stations (the abstract, col 2 lines 30-48, col 5 lines 4-9, col 10 lines 45-67, col 11 lines 1-3, disclosing network conditions, i.e., number of transmissions/receptions, collisions are monitored between stations and access point in within a WLAN);

using said measured delays to coordinate transmissions in a CSMA/CA scheme (see col 1 lines 55-64, col 2 lines 30-48, col 6 lines 50-67, col 7 lines 1-5, col 10 lines 45-67, col 11 lines 1-3),
wherein distributing said measured link delays and time slot value within said point-to-multipoint wireless communication network ((col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35);
and

aligning contention timing boundaries based on said measured link delays (col 4 lines 25-45,
col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 10, (Currently Amended) Young discloses an apparatus for operating node in a point-to-multipoint wireless communication network (see the abstract), said apparatus comprising:

a delay counter that measures delays between a root bridge and plurality of non-root bridges (figures 3 and 4, col 9 lines 20-35),

a MAC processor that calculates time slot value based on said measured link delay, distributes said measured link delays and said common time slot value within said point-to-multipoint wireless communication network (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35), uses said measured link delays to coordinate transmissions in a CSMA/CA scheme (figure 2, col 1 lines 35-40, col 5 lines 35-40, 50-67), and aligns contention timing boundaries based on said measured link delays and said common time slot values (col 4 lines 25-45, col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization

in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 17, (Currently Amended) Young discloses apparatus for operating a node in a point-to-multipoint wireless communication network (see the abstract), said apparatus comprising:

a physical layer block that receives a measured delay and a system slot time from another node (see col 2 lines 35-67, col 3 lines 1-5, col 5 lines 20, col 6 lines 50-67, col 7 lines 1-5, 50-55, col 8 lines 37-50); and

a MAC layer processor that uses aid measured delay and said system slot time to coordinate transmissions in a CSMA/CA scheme (figure 2, col 1 lines 35-40, col 5 lines 35-40, 50-67), wherein

contention timing boundaries are aligned based on said measured link delay and said slot time (col 4 lines 25-45, col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 18, (Currently Amended) Young discloses an apparatus for operating a point-to-multipoint wireless communication network, said apparatus comprising:

a delay counter that measures link delays between an access point and plurality of stations (see figures 3 and 4, col 9 lines 20-35);

a MAC layer processor that uses said measured delays to coordinate transmissions in a CSMA/CA scheme (figure 2, col 1 lines 35-40, col 5 lines 35-40, 50-67), distributes said measured link delays and said common time slot value within said point-to-multipoint wireless communication network (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35), uses said measured link delays to coordinate transmissions in a CSMA/CA scheme, and aligns contention timing boundaries based on said measured link delays and said time slot values (col 4 lines 25-45, col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing

Art Unit: 2617

between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 19, (Currently Amended) Young discloses an apparatus for operating a point-to-multipoint wireless communication network, said apparatus comprising:

means for measuring delays between a root bridge and a plurality of non-root bridges (the abstract, col 2 lines 30-48, col 5 lines 4-9, disclosing network conditions, i.e., number of transmissions/receptions, collisions are monitored between stations and access point in within a WLAN);

means for using said measured delays to coordinate transmissions in a CSMA/CA scheme (col 1 lines 55-64, col 2 lines 30-48, col 6 lines 50-67, col 7 lines 1-5), wherein means for using comprises means for calculating a time slot value based on said measured link delays and distributing said measured link delays and said time slot value within said point-to-multipoint wireless communication network (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35); and means for aligning contention timing boundaries based on said measured link delays (col 4 lines 25-45, col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 20, (Currently Amended) Young discloses a computer-readable medium storing computer executable instructions for operating a point-to-multipoint wireless communication network, said instructions comprising:

code that causes measurement of said link delays between a root bridge and a plurality of non-root bridges (the abstract, col 2 lines 30-48, col 5 lines 4-9, , col 10 lines 45-67, col 11 lines 1-3, disclosing network conditions, i.e., number of transmissions/receptions, collisions are monitored between stations and an access point in within a WLAN); and
code that causes use of said measured link delays to coordinate transmissions in a CSMA/CA scheme (col 1 lines 55-64, col 2 lines 30-48, col 6 lines 50-67, col 7 lines 1-5, col 10 lines 45-67, col 11 lines 1-3, describing usage of the monitored condition of network traffic load),

wherein said measured link delays is used in calculating a time slot value based on said measured link delays (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35), and distributed along with said time slot value within said point-to-multipoint wireless communication network (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35); and
code that causes alignment of contention timing boundaries based on said measured link delays and said common time slot values (col 4 lines 25-45, col 8 lines 55-67, col 9 lines 10-20, col 10 lines 1-40).

Young does not show link delays but Young discloses a method and system for improving system throughput where station transmission delays are collected, stations communicate RTS and CTS messages in order to set their NAV accordingly (see col 7 lines 48-55, col 8 lines 20-26), thus Young discloses a system communication delays. Moerder teaches method and system for time synchronization in wireless communication, where Moerder clearly discloses system link delays (see col 2 lines 60-67, col 4 lines 1-24, col 6 lines 20-30), thus Moerder discloses link delays.

Since both Young and Moerder teach a system and method for improving timing in a wireless link communication system, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Young's teachings and combining link delays, taught by Moerder so as to have the system and method discussed by Young improved (see col 1 lines 5-67, col 2 lines 1-27).

Young as modified by Moerder does not show a common time slot, however, Young discloses method and system improving throughput in a network, where the system discloses calculation of the number of transmissions over the network, number of collisions taking into account of carrier sense collision (see col 9 lines 20-67), thus Young discloses system communication transmissions with time involved. Nemoto teaches communication system and method for calculating transmission timing between stations in the system (see the abstract, col 2 lines 20-60, col 3 lines 60-67, col 4 lines 1-15), thus Nemoto discloses a system time slot being calculated.

Since Young, Moerder and Nemoto teach data communication system and method, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to

Art Unit: 2617

modify teachings of Young, modified by Moerder, and combining the teaching of Nemoto about calculating of a common time slot so as to improve the system and method discussed by Young as modified Moerder.

Consider claim 5, (original) The method of claim 1, Young, as modified by Moerder, further teaches wherein measuring and using are performed by said root bridge (col 1 lines 40-45, col 5 lines 20-34).

Consider claim 6, (original) The method of claim 1, Young, as modified by Moerder, further teaches wherein measuring and using are performed by one of said non-root bridges (col 4 lines 50-60, col 7 lines 20-43).

Consider claim 7, (original) The method of claim 1 Young, as modified by Moerder, further teaches wherein using comprises:

assigning transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non root bridges (col 5 lines 40-50, col 6 lines 52-67).

Consider claim 14, (original) The apparatus of claim 10 Young, as modified by Moerder, further teaches wherein said node is said root bridge (col 1 lines 20-35).

Consider claim 15, (original) The apparatus of claim 10 Young, as modified by Moerder, further teaches wherein said node is one of said non-root bridges (col 1 lines 20-35).

Consider claim 16, (original) The apparatus of claim 10, Young, as modified by Moerder, further teaches wherein said MAC layer processor assigns transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non-root bridges (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-40, col 5 lines 40-50, col 6 lines 52-67).

Consider claim 21 (Previously Presented): The method of claim 1 Young, as modified by Moerder, further teaches wherein coordinating transmissions comprises adjusting a network allocation vector time (see col 8 lines 25, col 9 lines 47-52).

Art Unit: 2617

Consider claim 22 (new), The method of claim 1, Young, as modified by Moerder, further teaches:

receiving a disassociation request message from one of said plurality of non-root bridges (col 8 lines 12-36, col 9 lines 1-20, col 10 lines 8-9);

deleting the non-root bridge from a non-root bridge list (col 4 lines 27-60, col 8 lines 12-36, col 9 lines 1-20, col 10 lines 8-9);

updating said common time slot value (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35);
and

distributing said updated time slot value to said plurality of non-root bridges (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35).

Consider claim 23, (new) The method of claim 1 Young, as modified by Moerder, further teaches:

receiving an association request message from a new non-root bridge that wants to join the point-to-multipoint wireless communication network (col 8 lines 12-36, col 9 lines 1-20); and

measuring link delays between said root bridge and said new non-root bridge (col 2 lines 35-45, col 4 lines 60-67, col 5 lines 25-35).

Consider claim 24 (new), The apparatus of claim 10 Young, as modified by Moerder, further teaches wherein said link delays are measured based on departure and arrival times of Request to Send and Clear to Send frames (see col 8 lines 10-25).

Consider claim 25 (new), The apparatus of claim 10 Young, as modified by Moerder, further teaches wherein said common slot value is calculated based on a longest measured link delay (see col 8 lines 10-25).

Consider claim 26 (new), The apparatus of claim 18 Young, as modified by Moerder, further teaches wherein the MAC layer processor is configured to set a network allocation vector of each set of multiple access collision avoidance packets (see col 8 lines 10-25, col 9 lines 10-20, 45-67, col 10 lines 1-18).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY C. HO whose telephone number is (571)270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Duc Nguyen/
Supervisory Patent Examiner, Art Unit 2617